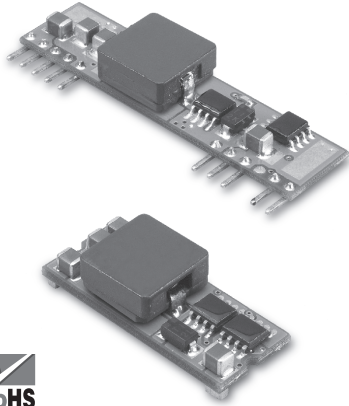


10 AMP POL CONVERTERS



Features:

- Non-Isolated POL Converter
- SIP / SMT Package
- Output Current 10AMP
- Input Voltage Range 3.0-5.5VDC
- 300KHz Switching Frequency
- High Efficiency to 95%
- Over Temperature Protection
- Continuous Short Circuit Protection
- Remote On/Off Control
- UL/c-UL 60950 Certified

Electrical Characteristics:

| MODEL Number | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT | | %EFF. |
|-----------------------------|---------------|----------------|----------------|---------------|-----------|-------|
| | | | | NO LOAD | FULL LOAD | |
| SIP 10-05S10 SMT10-05S10 | 3.0 –5.5 VDC | 1.0VDC | 10 A | 50mA | 2353mA | 85 |
| SIP 10-05S12 SMT10-05S12 | 3.0 –5.5 VDC | 1.2VDC | 10 A | 50mA | 2791mA | 86 |
| SIP 10-05S15 SMT10-05S15 | 3.0 –5.5 VDC | 1.5VDC | 10 A | 50mA | 3409mA | 88 |
| SIP 10-05S18 SMT10-05S18 | 3.0 –5.5 VDC | 1.8VDC | 10 A | 50mA | 4000mA | 90 |
| SIP 10-05S20 SMT10-05S20 | 3.0 –5.5 VDC | 2.0VDC | 10 A | 60mA | 4396mA | 91 |
| SIP 10-05S25 SMT10-05S25 | 3.0 –5.5 VDC | 2.5VDC | 10 A | 60mA | 5376mA | 93 |
| SIP 10-05S33 SMT10-05S33 | 4.5 –5.5 VDC | 3.3VDC | 10 A | 60mA | 6947mA | 95 |

NOTE: 1. Nominal Input Voltage 5.0 VDC

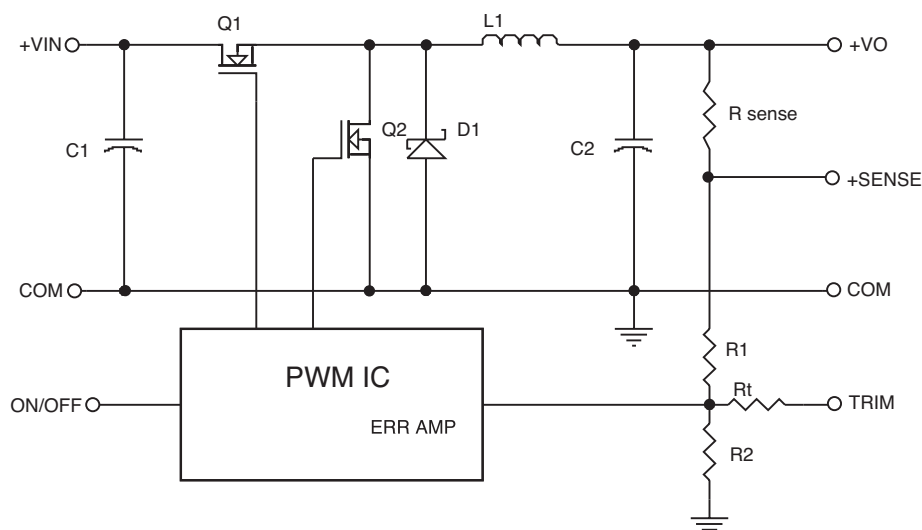


Figure 1. Simplified Schematic

Specification

INPUT SPECIFICATIONS:

| | |
|--|-----------------------|
| Input Voltage Range.....5V..... | 3.0 – 5.5V |
|5V..... | 4.5 – 5.5V |
| Under Voltage Lock-outPower up | 2.8V Typ. |
|Power down..... | 2.7V Typ. |
| Input Filter Type..... | Capacitive |
| Positive Remote on/off Control : | |
| Module ON..... | Open Circuit or = Vin |
| Module OFF..... | < 0.4 Vdc |

OUTPUT SPECIFICATIONS:

| | |
|---|--------------------------------|
| Voltage Accuracy..... | ±1.5% max. |
| Transient Response :25% Step Load Change..... | <200µ sec. |
| Ripple and Noise, 20MHz BW3..... | 20mV rms max 50mV pk-pk max |
| Coefficient..... | ±0.03%/C max |
| Short Circuit Protection..... | Continuous |
| Line Regulation1..... | ± 0.2% max. |
| Load Regulation2..... | ± 0.5% max. |
| Capacitive Load, Low ESR..... | 10000µF max. |
| External Trim Adj. Range..... | ±10% |

GENERAL SPECIFICATIONS:

| | |
|--|---------------------------------|
| Efficiency..... | See Table |
| Isolation Voltage..... | Non-isolation |
| Switching Frequency | 300KHz Typ. |
| Over Temperature Protection | 120°C Typ. |
| Operating Ambient Temperature Range..... | -40°C to +85°C |
| Power Derating Curve | see Figure 2,3 |
| Storage Temperature Range | -55°C to +125°C |
| Dimensions: | |
| SIP Package: 2.00 x 0.50 x 0.33 inches (50.8 x 12.7 x 8.3 mm) | |
| SMT Package: 1.30 x 0.530 x 0.366 inches (33.0 x 12.46 x 9.3 mm) | |
| Structure..... | Non-potted With Open Frame Type |
| Weight..... | 6.8g |

SIP10-05SXX (Vin=5V) Derating Curve

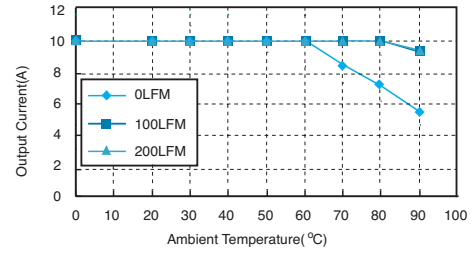


Figure 2. Typical Power De-rating for 5V IN

SMT10-05SXX (Vin=5V) Derating Curve

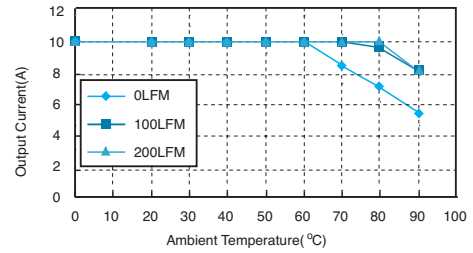


Figure 3. Typical Power De-rating for 5V IN

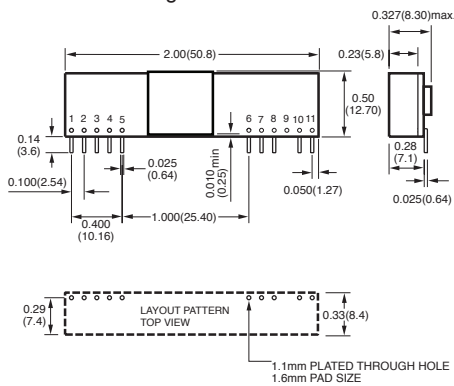
NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
3. The output noise is measured with 10µf tantalum capacitor and 1µf ceramic capacitor across output.
4. The Input Terminal Recommend to Parallel With 100µF Capacitor ESR<20mΩ to Reduce The Input Ripple Voltage
5. Suffix "N" to the Model Number with Negative Logic Remote on/off
 Model ON..... Open Circuit or < 0.4VDC
 Module OFF..... >+2.8VDC to Vin

Mechanical Specification

All Dimensions In Inches(mm)
 Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
 Millimeters: x.x= ±0.5, x.xx= ±0.25

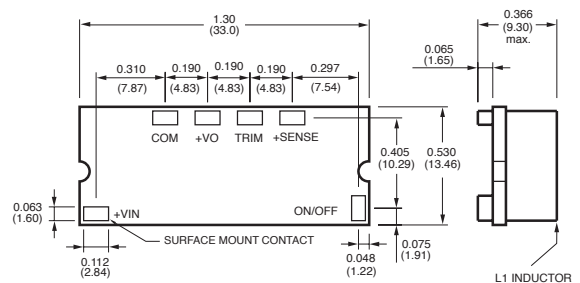
SIP Packages



| Pin | Function |
|-----|----------------|
| 1 | +Output |
| 2 | +Output |
| 3 | +Sense |
| 4 | +Output |
| 5 | Common |
| 6 | Common |
| 7 | +V Input |
| 8 | +V Input |
| 9 | No Pin |
| 10 | Trim |
| 11 | On/Off Control |

SMT Packages

BOTTOM VIEW OF BOARD



All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

Data sheets are subject to change without notice